UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/902,110	07/11/2001	William Holm	0104-0353P	8194

2292 7590 01/11/2005

BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER	
LORENGO, JERRY A	

ART UNIT	PAPER NUMBER
1734	

DATE MAILED: 01/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/902,110	HOLM ET AL.	
	Examiner	Art Unit	
	Jerry A. Lorengo	1734	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 October 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *20-26,32-39 and 56-80* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *20-26, 32-39 and 56-80* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 July 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. *20041020* .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

(1)

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 20-24, 32-37, 58 and 59[1] are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,511,545 to Banno et al.

Regarding applicant claims 20 and 32, Banno et al. disclose an apparatus for application of a viscous medium onto a substrate comprising (Figures 23 and 27; column 27, lines 1-45; column 33, line 10 to column 34, line 20):

(1) An applicator 1501 capable of applying a viscous medium 4 into a substrate 1,2,3;

(2) An inspection device 1502 capable of inspecting the results of the application by the applicator 0901;

---

[1] Note to Applicant: A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus shows all of the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987) Furthermore, "expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim." *Ex parte Thibault*, 164 USPQ 666,667 (Bd. App. 1969). Thus, the "inclusion of material or article worked upon does not impart patentability to the claims." In re Young, 75 F.2d 966, 25 USPQ 69 (CCPA 1935) (as restated in *In re Otto*, 312 F.2d 937, 136 (USPQ 458, 459 (CCPA 1963)). In the instant case, claims 58 and 59 contain limitations drawn to the material worked upon, i.e., the substrate to which the viscous medium is applied. Although claims 58 and 59 have been addressed in the rejection, they are being accorded no patentable weight.

(3) A Processor 1504,1505,1506 capable of determining any application errors based the inspection by the inspection means 1502; and

(4) A correction device 1501 (the applicator 1501 can function as both the applicator and the correction device) for correcting at least some of the error detected by the Processor 1504,1505,1506. Banno et al. Further disclose, as per applicant claims 20 and 32, that the apparatus is capable of depositing the viscous media at a plurality of locations followed by the inspection of the plurality of viscous media deposits after they have been deposited (column 34, lines 20-43). Two alternative embodiments of the apparatus of Banno et al. are illustrated below:

FIG. 23

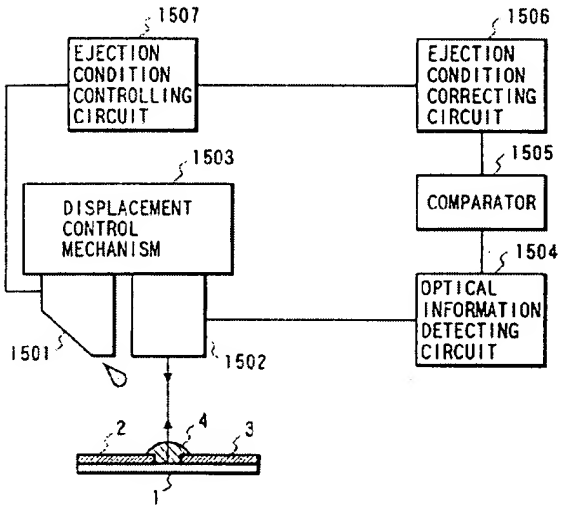
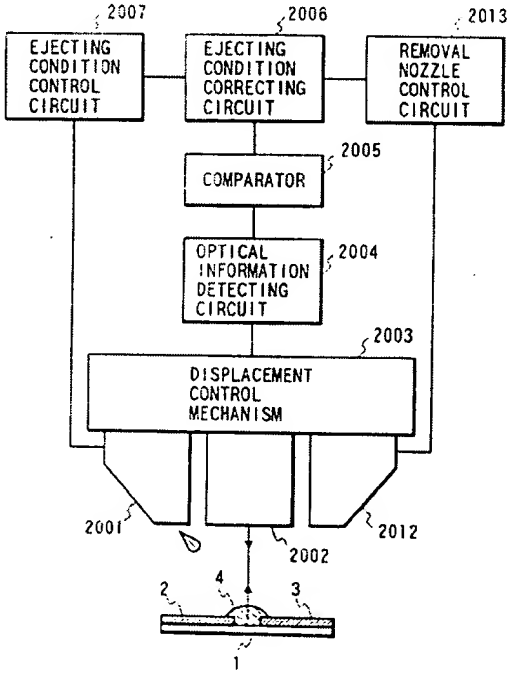


FIG. 27



Regarding applicant claims 21 and 33, Banno et al. disclose that the processing means 1504,1505,1506 comprises an evaluating means (comparator) 1505 for evaluating each of the determined errors and deciding (via ejection condition correcting circuit 1506) to what extent the determined errors are to be detected (column 27, line 66 to column 28, line 26).

Regarding applicant claims 22 and 34 and 35, Banno et al. disclose that the correction means comprises (as shown in Figure 23; column 12, lines 4-22) the applications means 1501 (which is an ink-jet ejecting device) for jetting additional viscous medium 4 onto the substrate

1,2,3 and/or a removing means 2012 (as shown in Figure 27; column 13, lines 21-31; column 33, line 46 to column 34, line 20) which is capable of removing surplus viscous medium 4 from the substrate 1,2,3

Regarding applicant claims 23, 24, 36 and 37, Banno et al. disclose that the application means 1501 or 2001 comprises an ink-jet ejecting device which is capable of jetting the initial amount and any addition amount of viscous medium 4 in response to any error detection and correction (column 33, line 46 to column 34, line 20).

Regarding applicant claims 58 and 59, Banno et al. disclose that the correction means is capable of correcting errors prior to the hardening of the viscous medium, such as by baking (column 34, lines 41-43).

(2)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 56, 57, 60, 61, 62-66, 69-74 and 77-80[2] are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,511,545 to Banno et al.

Regarding applicant claims 62 and 69, Banno et al. disclose an apparatus for application of a viscous medium onto a substrate comprising (Figures 23 and 27; column 27, lines 1-45; column 33, line 10 to column 34, line 20):

(1) An applicator 1501 capable of applying a viscous medium 4 into a substrate 1,2,3;

(2) An inspection device 1502 capable of inspecting the results of the application by the applicator 0901;

(3) A Processor 1504,1505,1506 capable of determining any application errors based the inspection by the inspection means 1502; and

(4) A correction device 1501 (the applicator 1501 can function as both the applicator and the correction device) for correcting at least some of the error detected by the Processor 1504,1505,1506. Banno et al. further disclose, as per applicant claims 20 and 32, that the apparatus is capable of depositing the viscous media at a plurality of locations followed by the inspection of the plurality of viscous media deposits after they have been deposited (column 34, lines 20-43).

Although Banno et al. disclose that the apparatus includes a process for the determination of any application errors by which corrective action is undertaken, they do not specifically disclose that the processor is capable of determining the time (individual and/or total) required for correction the time estimation for corrective action , as per applicant claims 56, 57, 62 and 69, it would have been obvious to one of ordinary skill in the art at the time of invention that the apparatus of Banno et al. would have been capable of such an operation motivated by the fact that since the corrective actions of the Banno et al. apparatus are essentially controlled by the processor means, the skilled artisan would have been appreciative of the fact that the functionalization of error correction upon the time required for the apparatus to facilitate such correction would have been the result of routine experimentation by one of ordinary skill in the

[2] *See Supra* note 1 and accompanying text with regards to applicant claims 60, 61 and 77-80.

process control arts. Furthermore, because all automated electronic process control is based upon "clock" cycling, the modification of the Banno et al. apparatus to take into account such a temporal function would be the result of optimization in pursuit of process efficiency and robustness.

Regarding applicant claims 60 and 61, Banno et al. disclose that the correction means is capable of correcting errors prior to the hardening of the viscous medium, such as by baking (column 34, lines 41-43).

Regarding applicant claims 63 and 70, Banno et al. disclose that the processing means 1504,1505,1506 comprises an evaluating means (comparator) 1505 for evaluating each of the determined errors and deciding (via ejection condition correcting circuit 1506) to what extent the determined errors are to be detected (column 27, line 66 to column 28, line 26).

Regarding applicant claims 64 and 71 and 72, Banno et al. disclose that the correction means comprises (as shown in Figure 23; column 12, lines 4-22) the applications means 1501 (which is an ink-jet ejecting device) for jetting additional viscous medium 4 onto the substrate 1,2,3 and/or a removing means 2012 (as shown in Figure 27; column 13, lines 21-31; column 33, line 46 to column 34, line 20) which is capable of removing surplus viscous medium 4 from the substrate 1,2,3

Regarding applicant claims 65, 66, 73 and 74, Banno et al. disclose that the application means 1501 or 2001 comprises an ink-jet ejecting device which is capable of jetting the initial amount and any addition amount of viscous medium 4 in response to any error detection and correction (column 33, line 46 to column 34, line 20).

(3)

Claims 25, 26, 38, 39, 67, 68, 75, 76, are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,511,545 to Banno et al. in view of the admitted prior art.

Although Banno et al. disclose that the application device 1501, 2001 preferably comprises a jetting device, the are silent as to the use of a screen printer or contact dispenser, as set forth in applicant claims 25, 26, 38, 39, 67, 68, 75, 76, in place of the jetting device.

Nonetheless, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize such coating means in the apparatus of Banno et al. in place of the jetting means motivated by the fact that the admitted prior art disclose that screen printing and contact

dispensing are conventional means and method of dispensing known in the art (specification, page 5, lines 11-19page 6, line 25 to page 7, line 2; page 9, lines 1-9).

(4)

Response to Amendments and Arguments

The amendments and arguments filed October 22, 2004 are acknowledged. As set forth above, a new grounds of rejection has been set forth in response to the amendments to applicant claims 20 and 32 and the addition of new claims 56-80. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

(5)

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

(6)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry A. Lorengo whose telephone number is (571) 272-1233. The examiner can normally be reached on Monday through Friday, 8:30 A.M. to 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Fiorilla can be reached on (571) 272-1187. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

J.A. Lorengo, Primary Examiner
AU 1734
January 9, 2004